~~Patent Claims~~What is claimed is:

1. A method for synchronizing network nodes ~~(NK1, NK11, NK12, NK13, NK14)~~ in a subnetwork, where the network nodes ~~(NK1, NK11, NK12, NK13, NK14)~~ have timers and at least one of the network nodes ~~(NK1)~~ undertakes the function of a master, the time on the master being used as the reference time for the subnetwork, ~~characterized in that~~the method comprising:

~~the master first causes~~insuring no unauthorized communication ~~to take~~ takes place in the subnetwork ~~during the subsequent method steps~~;

sending ~~the master then sends~~ a delay-time measurement message to every network node in the subnetwork in order to ascertain ~~the~~a signal delay time;

sending ~~the master then sends~~ a time setting message to every network node; and

aligning the time on the network nodes ~~is then aligned~~ with the reference time for the subnetwork.

wherein each of the first three method steps are performed my by the master.

2. ~~The method as claimed in patent claim 1, characterized in that~~ further comprising ~~the master stores~~ storing the signal delay time for the network nodes ~~(NK11, NK12, NK13, NK14)~~in the master.

3. The method as claimed in ~~one of the preceding patent claims~~claim 1, ~~characterized in that~~ wherein a network node ~~(NK11, NK12, NK13, NK14)~~, ~~on~~upon receiving a delay-time measurement message, simulates the alignment of ~~its~~a time thereof with the reference time at least once, and then sends a response to the master.

4. The method as claimed in ~~one of the preceding patent claims~~claim 1, ~~characterized in that~~ wherein the time on a network node ~~(NK11, NK12, NK13, NK14)~~ is aligned with the reference time for the subnetwork immediately after reception of the time setting message.

5. The method as claimed in ~~one of the preceding patent claims~~claim 1, ~~characterized in that~~ wherein the time on a network node ~~(NK11, NK12, NK13, NK14)~~ is aligned with the reference time for the subnetwork ~~on~~ by way of a step-by-step basis.

6. The method as claimed in ~~one of the preceding patent claims~~claim 1, ~~characterized in that~~ wherein ~~at least part of it is~~ at least one step is repeated a plurality of times ~~if appropriate~~.

7. The method as claimed in ~~patent~~ claim 6, characterized in that the master ascertains the signal delay time by sending a plurality of delay-time measurement messages and using formation of a mean.

8. The method as claimed in ~~one of the preceding patent claims~~claim 1, ~~characterized in that~~wherein ~~the network node (NK1) which undertakes the function of~~ the master ~~in a subnetwork (NM2, NK1, NK11, NK12, NK13, NK14)~~ ascertains all the network nodes ~~(NK1, NK11, NK12, NK13, NK14)~~ which are part of the subnetwork.

9. The method as claimed in ~~one of the preceding patent claims~~claim 1, ~~characterized in that~~wherein at least one network node ~~(NK11)~~ in a subnetwork ~~(NM2, NK1, NK11, NK12, NK13, NK14)~~ undertakes the function of the master in another subnetwork ~~(NM3, NK11, NK111, NK112)~~.

10. The method as claimed in ~~one of the preceding patent claims~~claim 1, ~~characterized in that~~ wherein the network nodes ~~(NK1, NK11, NK12, NK13, NK14)~~ in a subnetwork are connected to one another by ~~means~~ way of an optical transmission medium ~~(NM2)~~.

11. The method as claimed in claim 2, wherein a network node, upon receiving a delay-time measurement message, simulates the alignment of a time thereof with the reference time at least once, and then sends a response to the master.

12. The method as claimed in claim 2, wherein the time on a network node is aligned with the reference time for the subnetwork immediately after reception of the time setting message.

13. The method as claimed in claim 3, wherein the time on a network node is aligned with the reference time for the subnetwork immediately after reception of the time setting message.

14. The method as claimed in claim 2, wherein the time on a network node is aligned with the reference time for the subnetwork by way of a step-by-step basis.

15. The method as claimed in claim 3, wherein the time on a network node is aligned with the reference time for the subnetwork by way of a step-by-step basis.

16. The method as claimed in claim 4, wherein the time on a network node is aligned with the reference time for the subnetwork by way of a step-by-step basis.

17. The method as claimed in claim 2, wherein the master ascertains all the network nodes which are part of the subnetwork.

18. The method as claimed in claim 3, wherein the master ascertains all the network nodes which are part of the subnetwork.

19. The method as claimed in claim 4, wherein the master ascertains all the network nodes which are part of the subnetwork.

20. The method as claimed in claim 5, wherein the master ascertains all the network nodes which are part of the subnetwork.

21. The method as claimed in claim 2, wherein at least one network node in a subnetwork undertakes the function of the master in another subnetwork.

22. The method as claimed in claim 3, wherein at least one network node in a subnetwork undertakes the function of the master in another subnetwork.

23. The method as claimed in claim 4, wherein at least one network node in a subnetwork undertakes the function of the master in another subnetwork.

24. The method as claimed in claim 5, wherein at least one network node in a subnetwork undertakes the function of the master in another subnetwork.

25. The method as claimed in claim 8, wherein at least one network node in a subnetwork undertakes the function of the master in another subnetwork.

26. A method, comprising:

insuring no unauthorized communication takes place in a subnetwork;

sending a delay-time measurement message to every network node in the subnetwork in order to ascertain a signal delay time;

sending a time setting message to every network node; and

aligning the time on the network nodes with the reference time for the subnetwork.